

Appn No. 10/782,895
Arndt Dated March 17, 2006
Response to Office Action of January 24, 2006

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REMARKS/ARGUMENTS

Applicant thanks Examiner for the detailed Office Action dated January 24, 2006. In response to the issues raised, Applicant offers the following submissions and amendments.

Amendments

Independent claims 1, 18 and 19 have been amended to highlight the distinction between the present invention and the cited references. The description has been amended at page 6 to correct a transcription error.

Accordingly, the amendments do not add any new matter.

Claims - Novelty

The Examiner maintains the rejection of Claims 1, 2, 4, 5, 8, 10, 11, 16 to 18 for lack of novelty in light of US 5,453,931 to Watts Jr.

Claims 1 and 18 have been amended to explicitly define that the movement of the robot is derived from the indicating data generated by the coded data provided by the interface surface. This represents the essential difference between the invention and the prior art. The prior art robots, such as that described in Watts Jr, determine their position by measuring the distance and direction traveled relative to one or more reference points. Unfortunately, the distances are measured by counting the rotations of the robot wheels (or tracks in the case of the cited robot). This is prone to inaccuracy because of slippage between the wheels and ground surface, and deviation from a straight path. Watts Jr recognizes that calculating the robot position by monitoring turn of the wheel is inherently inaccurate at column 6, lines 23-26 (although Watts Jr claims to restrict errors from meandering or veering).

In contrast, the present invention receives continuous position information directly from the interface surface itself, thereby eliminating deviations from slippage or the cumulative errors associated measuring the rotation of the wheels. In this way, the robot navigates with accuracy and does not require sophisticated position correction mechanisms. This is discussed in the description at page 3, lines 27 to 33 and page 10, lines 31 to 34.

The cited robot does not sense any coded data from the ground surface. The ground surface does have any coded data. The coordinates are not physically provided on the ground surface. The coordinate system is an arbitrarily chosen unit of measuring distance or angles from a point of reference. Watts Jr calculates its position on the coordinate system after being placed at a predetermined starting point. It does not determine its position from the ground surface itself.

Watts Jr does not teach or suggest a robot that determines its position on a surface from data provided by the surface itself. Accordingly, amended Claims 1 and 18 are not anticipated by the cited reference.

Likewise, claims 2, 4, 5, 8, 10, 11, 16 and 17 are similarly novel by virtue of their appendage to claim 1.

Claims – Obviousness

Claim 3 stands rejected as obvious in light of Watts Jr. in view of US 4,864,618 to Wright et al. Claims 6, 9, 12, 19 and 20 stand rejected as obvious in light of Watts Jr. in view of US 5,652,412 to Luzon. Claims 5, 7 and 13 stand rejected as obvious in light of Watts Jr. in view of US 5,692,073

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to Cass, in further view of US 6,220,865 to Macri et al. Claims 14 and 15 stand rejected as obvious in light of Watts Jr. in view of US 6,076,734 to Dougherty et al.

The cited references fail to support rejections under the provisions of 35 USC§103, as the proposed combinations do not teach all the elements defined by the claims against which they are cited.

As discussed above, Watts Jr. fails to disclose several essential claim elements defined by claims 1 and 18. Claims 3, 5-7, 9, 12-15 are directly or indirectly appended to claim 1 and therefore, these claims are not rendered obvious by the combined teachings of Watts Jr. and Wright, Luzon, Cass and Macri, or Dougherty respectively.

Amended Claim 19 also defines a robot that can sense coded data from an interface surface such that it can generate indicating data that is transmitted to a computer system that provides movement instructions based on the indicating data generated from the coded data. As discussed above, Watts Jr. and Luzon fail to disclose these elements. Accordingly, amended claim 19 does not offend 35 USC§103.

In light of the above, it is respectfully submitted that all of the Examiner's rejections have been successfully traversed. The Applicant believes that the application is now in condition for allowance and favorable reconsideration of the application is courteously solicited.

Very respectfully,
Applicant:


ZHENYA ALEXANDER YOURLO

Applicant:


PAUL LAPSTUN

Applicant:


KIA SILVERBROOK

C/o: Silverbrook Research Pty Ltd
393 Darling Street
Balmain NSW 2041, Australia

Email: kia.silverbrook@silverbrookresearch.com

Telephone: +612 9818 6633

Facsimile: +61 2 9555 7762